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November 6, 2009

Via ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
The Portals
445 12th Street, SW
Washington, DC 20554

Re: Notice of Ex Parte Communications, Docket No. 09-51

Dear Ms. Dortch:

On November 3, 2009, Corry Marshall, an attorney with the American Public Power Association (APPA), and the undersigned outside counsel to APPA, met with Nick Sinai, Energy and Environment Director, National Broadband Task Force, and Charles Worthington, an Energy and Environment program analyst on the National Broadband Plan team to discuss the role that public power utilities can play in accelerating America's deployment of advanced communications capabilities and in promoting energy conservation and security. Messrs. Marshall and Baller also discussed the so-called "private use" exception to municipal bond financing and discussed its adverse effects on potential public-private partnerships. They also promised to provide electronic copies of the attached items.

The following day, Mr. Marshall also furnished to Mr. Sinai the following statistics on communications activities of members of APPA: Broadband transport: 138, Cable modem/DSL: 84, Cable TV: 114, Fiber leasing: 192, Fiber to the home: 33, ISP: 141, Local Phone: 63, Long Distance: 55, Video on Demand: 20, and Wireless network: 77.

Sincerely,

Jim Baller

James Baller

cc: Nick Sinai and Charles Worthington

Building Fiber-to-the-Home
Communities **Together**



TAP INTO THE MOST VALUABLE BROADBAND RESOURCE AVAILABLE



Municipal FTTH Systems

For More Information Contact:

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Municipal Fiber to the Home Deployments: Next Generation Broadband as a Municipal Utility

Updated-October 2009

The market penetration of fiber-to-the-home in North America is increasing, with connections now reaching five and one quarter million U.S. households. Fiber to the home (FTTH) is quickly becoming the broadband service of choice for consumers looking to keep pace with high-bandwidth Internet applications and home entertainment options such as high definition video on demand. What's more, this ongoing transformation to fiber-driven, next-generation networks is now a matter of strategic national importance, particularly as other countries in Asia and Europe proceed toward wiring up their communities with high-bandwidth fiber. Few people understand this better than civic leaders in many of America's outlying cities and towns, where access to the information highway can mean the difference between a future of robust economic development and one of community decline.

Accordingly, a growing number of municipal governments are taking it upon themselves to build FTTH networks – much in the way that they have previously built roads, sewers and/or electrical systems – as a means of ensuring that local residents have access to necessary services, in this case, the Internet connectivity for the 21st Century. These

municipal deployments are usually undertaken after private service providers have declined to upgrade their networks or build such systems.

Deployments by municipalities were among the first FTTH systems operating in the United States. Though, in aggregate, they do not approach the number of FTTH subscribers of a Verizon – which currently accounts for nearly three quarters of all FTTH deployments in the U.S. – municipal systems do have a significant percentage of all non-RBOC subscribers. Further, they represent an important aspect of national FTTH deployment, namely, the option and opportunity for local elected officials and civic leaders to upgrade local connectivity - when private enterprise will not take on the job.

It is in the national interest that higher-speed networks proliferate quickly and to the greatest extent possible – and that special measures be taken to ensure that these networks can be accessed by people who live beyond the major metropolitan areas. Accordingly, it is the position of the FTTH Council that anyone who has the means and the desire to build an FTTH network should be allowed and encouraged to do so – especially when it is an elected local government that is taking the decision



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to build when the private sector will not. Clearing the way for further municipal deployments of FTTH will help ensure that America is wired up for the global competition in technology and information.

Given all the above, what is the current state of municipal FTTH deployments? How are these systems faring, and what is their future? To find out more, the FTTH Council commissioned RVA LLC¹ – the leading market research firm specializing in FTTH – to survey municipal systems for the purpose of gathering first-hand status information from network operators. Its conclusions are summarized below.

1. Municipal FTTH systems are continuing to proliferate where allowed.

By definition, municipal FTTH systems are broadband communications systems run by public entities such as municipalities, counties, municipally-owned electric utilities or public utility districts, and which deliver services such as voice, television and Internet over direct fiber connections to residences. In addition, these systems typically offer reliable broadband connections to businesses, government locations and schools and libraries.

As of October, 2009, there are 57 public providers operating FTTH systems in North America. (These providers represent over 85 individual cities. A few

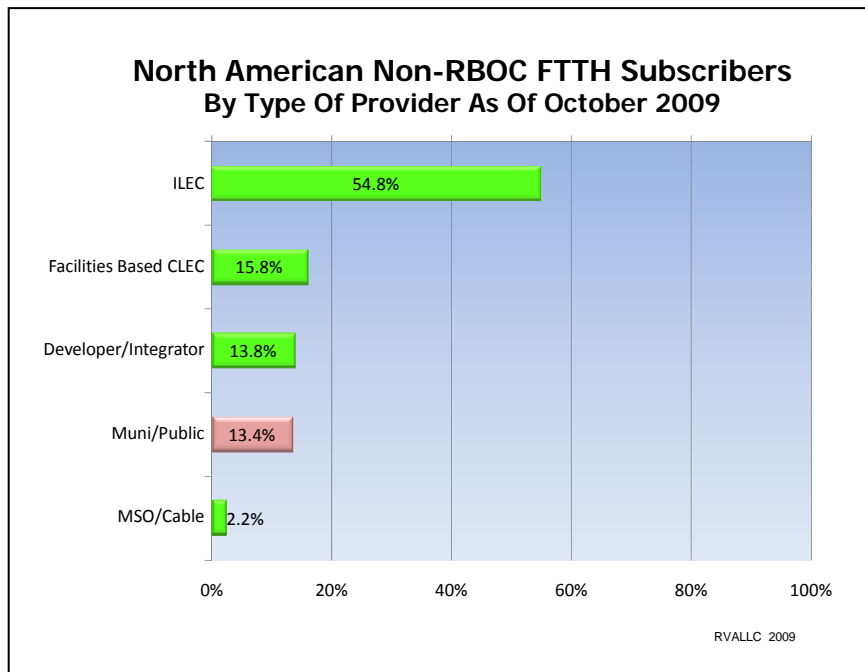
cities have banded together to form consortiums and others are part of larger public utility districts.) In addition, to this list there are at least another 15 municipalities offering just fiber to the business.

Altogether, they serve 3.4 percent of the FTTH subscribers in North America. More importantly,

they represent 13.4 percent of the non- RBOC FTTH deployments, with most of the remainder being served by small and medium-size telephone companies. The chart on this page lists FTTH subscribers by type of service provider.²

Systems operated by municipal and public electric

utilities were among the first FTTH networks deployed in North America. Systems like Bristol, VA, Dalton, GA, Chelan County, WA, Grant County, WA, Jackson, TN, Kutztown, PA, and Reedsburg, WI all were started between 1999 and 2003. The average size of the first municipal FTTH systems was comparatively small – under 5,000 subscribers. Today, many new or expanded municipal FTTH systems are considerably larger,



² It should be noted that not all municipal communications systems delivering television or Internet to area premises are FTTH. Hybrid Fiber Coax (HFC) or fiber to the business only (FTTB) systems are sometimes mischaracterized as municipal FTTH systems. (Examples of municipal networks sometimes mistakenly called FTTH systems include those networks deployed in Tacoma, WA and Marietta, GA. While these systems are generally successful, the FTTH Council does not have in-depth information on their financial performance.

¹ www.RVALLC.com



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and the average size of municipal deployment continues to grow. Larger cities – including Seattle, WA, San Francisco, CA, Portland, OR and St. Paul, MN – are considering building municipal FTTH systems.

A list of all municipally-operated FTTH systems in North America currently serving customers is included at the conclusion of this report.

2. More, and larger, municipal FTTH systems are under development for 2010

The success of municipal FTTH deployments in improving local economies and attracting new business has led other local governments to pursue this option. Recent FTTH bond referendums have been highly successful. The number of municipal FTTH systems will likely grow in the next two years as there appears to be a resurgence of interest in deployment by municipalities and a number of applications for stimulus funds where incumbent telephone company's are reluctant to invest in upgrading their networks. Older FTTH systems, such as that operated by the Grant County Public Utility District in Washington State, are now expanding again to cover more of the citizens in their service areas. Additional muni systems are in various stages of study, funding and development.

3. The “success” of municipal FTTH systems is substantiated by high subscriber take rates.

Based on interviews with municipal system operators and managers conducted by RVA, municipal FTTH systems have generally been undertaken in areas where it was perceived that there was little chance that private providers would initiate a fiber to the residence program in a reasonable amount of time – and where local leaders felt that having next-generation broadband connectivity was essential to the welfare of the community. (If private parties are willing to participate, municipalities have often sought to partner with these companies to help speed the introduction of FTTH to the community. One example of such a partnership has been the City of Fort Wayne, Indiana, which launched such an effort in

partnership with Verizon rather than build its own city-run system.)

Municipal FTTH systems have generally been successful to date. In some cases, as expected, projects have had to deviate from their original business plans in order to respond to realities and ensure success in the field. A number of systems have far exceeded original expectations, while a few others are behind early expectations. One, Provo Utah was sold to a private company. This transaction allowed the city to retain its FTTH network, and the operator to sidestep the Utah restrictions on muni's operating communications systems. As of this printing, not a single muni FTTH system has failed.

In the case of muni systems, of which many are not-for-profit enterprises, one measure of “success” is defined as the level of their “take rate” – that is, the percentage of potential subscribers who are offered the service that actually do subscribe. Nationwide, the take rates for retail municipal systems after one to four years of operation averages 54 percent. This is much higher than larger incumbent service provider take rates, and is also well above the typical FTTH business plan. Deployments usually require a 30-40 percent take rate to “break even” within planned payback periods.

4. The effect of municipal FTTH systems on local economic development is significant

There is evidence that municipal FTTH systems positively impact local economic growth. Many FTTH cities attribute the success of efforts to retain and/or facilitate the expansion of businesses at least in part to the lure of their local FTTH communication infrastructure. Examples include information-intensive companies such as Google, MSN and Yahoo. Specific examples of large employers moving to communities in part because of the local FTTH system have been noted by many FTTH cities. The chart on the next page lists new business relocations that were attributed in part or in full to availability of FTTH as the community communication infrastructure.



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According to community leaders interviewed, the attracted companies believe that local fiber to the premise systems allow them to do business more efficiently online with less cost. The availability of redundant fiber services from local providers is often also mentioned as a plus, as is the prospect of being able to expand quickly to non-adjacent buildings while still being tied to together via a virtual private network. The ease of employees working from home is often mentioned by relocation decision makers as a positive factor. RVA consumer

(There are even documented cases of important employees having dedicated fiber lines between home and office in municipal FTTH cities.) Finally, interviewees noted the importance of improved quality of life for employees thanks to the availability of high bandwidth video and Internet services to nearby homes and schools.

Many municipalities also report an increase in home-based businesses because of FTTH – with many of these businesses bringing in revenue from outside the region. Specifically mentioned were examples of businesses requiring very high bandwidths for tasks such as scientific consulting and video editing.

Several municipalities also noted increased efficiency in city government because of the municipal fiber system.

Examples of such productivity improvements have included: systems to monitor remote inventories more efficiently and systems to reduce physical transport costs such as having prisoners face judges via video conferencing from detention facilities (especially for “first appearances”). Productivity enhancement has also included automated meter reading and the ability to remotely turn on or off the utility for non payment such as the system currently being implemented by Clarksville, TN.

Though more difficult to quantify, the “green” advantages of reduced costs from more telework have also been cited by those interviewed, including the anticipation of less road and bridge maintenance, and lower automobile pollution for the community.

5. Municipal FTTH systems have a positive impact on overall FTTH and broadband use.

One important early result of municipal FTTH systems was to help prove and incubate the technology of direct fiber optic access. From 2000-2004, municipal providers represented some of the largest FTTH trials at the time, and some RVA has interviewed feel that FTTH could not have been implemented as quickly by private providers without this in-the-field experience.

Municipalities Reporting Plants Locating – in Part Because of FTTH

Auburn IN	Cooper Tire Expansion
Bristol TN	Media General
Bristol VA	Northrup Grumman CGI
Chelan County WA	Yahoo
Douglas County WA	Sabey Corporation
Grant County WA	MSN (Microsoft) Ask Jeeves Intuit
Independence OR	Metal fabrication companies
Kutztown PA	Film production companies
LENOSIWSKO VA	Data Centers
Mason County WA	Louisville Slugger Sims Technology companies Online engineering firms
Morristown TN	Colgate Palmolive
Powell WY	Alpine Access Virtual Call Center
Windom MN	Trucking companies

research has shown that FTTH subscribers work from home significantly more often than those with DSL, wireless or cable modem connections, because of the speed and reliability of their connections.



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Municipal FTTH systems may influence overall FTTH and broadband penetration. Though the difference does not rise to the level of statistical significance at 95 percent confidence, states that do not restrict public involvement in broadband and telecommunications services generally have higher overall FTTH and broadband penetration than do states with prohibitions of or restrictions on municipal broadband.

It should also be noted that restrictions on municipal broadband are correlated with lower take rates for these systems. As mentioned above, states that mandate open access systems (i.e. Utah, Washington) currently have lower take rates for FTTH systems because of the mandated two-tier operation method.

6. CONCLUSION: Municipal FTTH Systems are an important element of national FTTH deployment and should be encouraged.

Municipal FTTH deployments are alive and well – and expanding on early pioneer success stories.

Current deployments can point to local economy improvements as well as profitable operation and early pay-back of bonds.

States with regulatory barriers tend to trail in overall broadband penetration. Removal of legal and regulatory restrictions on municipal operation of communications networks will accelerate broadband investment, improve subscriber penetration rates and enable local governments in many outlying areas to ensure that their citizens can be part of the high-bandwidth future.

While municipal systems are beneficial and, in general are profitable, there still are restrictions in 14 states limiting or prohibiting such systems. Legislation has been introduced in both Houses of Congress to preempt state and local laws which currently ban the provision of broadband services by public entities. The Council encourages the passage of the Community Broadband Act or similar legislation, which frees municipalities in those 14 states to invest in next-generation networks.

North American Municipal Systems Currently Serving Customers with Fiber to the Home – October 2009

SYSTEMS SERVING LARGE PERCENTAGE OF SERVICE AREA (41)		SYSTEMS SERVING LIMITED FTTH AREAS, OR JUST STARTING (16)	
Auburn IN	Jackson TN	Radium Hot Springs BC	Abbingdon, VA
Barnesville MN	Kutztown PA	Reedsburg WI	Ashland, OR
Bellevue, IA	Lafayette LA	Rochelle, IL	Baldwin, WI
Bristol TN	LENOWISCKO VA	Sallisaw OK	Cedar Falls IA
Bristol VA	Lenox IA	Shawano WI	Clallum PUD WA
Brookings, SD	Loma Linda CA	Spencer IA	CMON BC
Burlington VT	Marshall MO	Tulahoma TN	Crosslake MN
Chattanooga TN	Mason County PUD WA	UTOPIA UT	Danville VA
Chelan PUD WA	Mi-Conexion NC	Wilson NC	Glasgow KY
Churchill County, NV	MINET OR	Windom MN	Holland MI
Clarksville TN	Morristown TN		Ketchikan AK
Crawfordsville IN	North Kansas City MO		Monticello MN
Dalton GA	Phillipi WV		Pend Oreille PUD WA
Douglas County PUD WA	Powell WY		Sylacauga AL
Gainesville FL	Pulaski TN		Taunton MA
Grant County PUD WA	Quincy FL		Tifton GA

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STATE RESTRICTIONS ON COMMUNITY BROADBAND SERVICES OR OTHER PUBLIC COMMUNICATIONS INITIATIVES

1. Alabama authorizes municipalities to provide telecommunications, cable, and broadband services, but it imposes numerous restrictions that collectively make it very difficult for municipalities to take advantage of this authority. For example, Alabama prohibits municipalities from using local taxes or other funds to pay for the start-up expenses that any capital intensive project must pay until the project is constructed and revenues become sufficient to cover ongoing expenses and debt service; requires each municipal communications service to be self-sustaining, thus impairing bundling and other common industry marketing practices; and requires municipalities to conduct a referendum before providing cable services.¹ (*Alabama Code § 11-50B-1 et seq.*)
2. Arkansas expressly prohibits municipal entities from providing local exchange services. (*Ark. Code § 23-17-409*)
3. Colorado requires municipalities wishing to provide cable, telecommunications, or broadband services to hold a referendum before doing so, unless the community is unserved and the incumbents have refused to provide the services in question in response to a request by the community. (*Colo. Rev. Stat. Ann. § 29-27-201 et seq.*)
4. Florida by imposes price-raising ad valorem taxes on municipal telecommunications services, in contrast to its treatment of all other municipal services sold to the public. (*Florida Statutes §§ 125.421, 166.047, 196.012, 199.183 and 212.08*). In addition, since 2005, Florida has subjected municipalities to very requirements that make it very difficult for capital intensive communications initiatives, such as fiber-to-the-home projects, to go forward. For example, Florida requires municipalities that wish to provide communications services to conduct at least two public hearings at which they must consider a variety of factors, including “a plan to ensure

¹ While municipalities sometimes prevail in such referenda, they are time-consuming and burdensome, making public communications initiatives much more difficult than private initiatives. Moreover, in most cases, the incumbent communications providers vastly outspend municipalities and dominate the local news through their control of the local cable system. For example, in a referendum on a public fiber-to-the-home initiative in Batavia, Geneva, and St. Charles, Illinois, the incumbents acknowledged spending more than \$300,000 in opposition to the initiative, whereas the cities were not permitted to spend any funds to support the initiative, and the local citizen advocates had less than \$5,000 available to do so.

that revenues exceed operating expenses and payment of principal and interest on debt within four years.” Since fiber-to-the-home (FTTH) projects, whether public or private, often require longer than four years to become cash-flow positive, this requirement either precludes municipalities from proposing FTTH projects or invites endless debate over whether a municipality’s plan is viable. (*Florida Statutes § 350.81*)

5. Louisiana requires municipalities to hold a referendum before providing any communications services, requires municipalities impute to themselves various costs that a private provider might pay if it were providing comparable services, and suspends any incumbent provider’s franchise and other obligations (e.g., franchise fees, PEG access, institutional networks, etc.) as soon as a municipality announced that it is ready to serve even a single customer of the service in question.² The suspension remains in force until the monetary value of the municipality’s obligations equal the monetary amount value of the obligations incurred by the private operators for the previous ten years. (*La. Rev. Stat. Ann. § 45:884.41 et seq.*)
6. Michigan permits public entities to provide telecommunications services only if they have first requested bids for the services at issue, have received less than three qualified bids from private entities to provide such services, and have subjected themselves to the same terms and conditions as specified in their request for proposals. (*Mich. Comp. Laws Ann. § 484.2252*)
7. Minnesota requires municipalities to obtain a super-majority of 65% of the voters before providing local exchange services or facilities used to support communications services. (*Minn. Stat. Ann. § 237.19*)
8. Missouri bars municipalities and municipal electric utilities from selling or leasing telecommunications services to the public or telecommunications facilities to other communications providers, except for services for used for internal purposes; services for educational, emergency and health care uses; and “Internet-type” services. (*Mo. Rev. Stat. § 392.410(7)*) Missouri also prohibits municipalities from providing or supporting the provision of cable services by third parties without first conducting a referendum. (*Mo. Rev. Stat. § 71.970*)
9. Nebraska generally prohibits agencies or political subdivisions of the state, other than public power utilities, from providing any wholesale or retail broadband, Internet, telecommunications

² Municipalities typically have lower costs than private entities and do not seek the high short-term profits that shareholders and investors expect of private entities. As a result, municipalities can sometimes serve areas that private entities shun and can often provide more robust and less expensive services than private entities are willing to offer. Imputed cost requirements have the purpose and effect of preventing municipalities from doing these things, by requiring municipalities to raise their rates to levels at or above the levels that make it uneconomic for private entities to serve certain areas at all or from offering robust or inexpensive services. Imputing costs is also difficult, time-consuming, inexact, and subjective. As a result, the imputed cost requirements give opponents of public communications initiatives unlimited opportunities to raise objections that significantly delay and add to the costs of such initiatives.

or cable service. Public power utilities are permanently prohibited from providing such services on a retail basis, and they can sell or lease dark fiber on a wholesale basis only under limited conditions. For example, a public power utility cannot sell or lease dark fiber at rates lower than the rates that incumbents are charging in the market in question. (*Neb. Rev. Stat. Ann. § 86-575, § 86-594*)

10. Nevada prohibits municipalities with populations of 25,000 or more and counties with populations of 50,000 or more from providing “telecommunications services,” as defined by federal law. (*Nevada Statutes § 268.086, § 710.147*)
11. Pennsylvania prohibits municipalities from providing broadband services to the public for a fee unless such services are not provided by the local telephone company and the local telephone company refuses to provide such services within 14 months of a request by the political subdivision. In determining whether the local telephone company is providing, or will provide, broadband service in the community, the only relevant consideration is data speed. That is, if the company is willing to provide the data speed that the community seeks, no other factor can be considered, including price, quality of service, coverage, mobility, etc. (*66 Pa. Cons. Stat. Ann. § 3014(h)*)
12. South Carolina imposes significant restrictions and burdensome procedural requirements on municipal providers of telecommunications services. Among other things, the State deprives municipal providers of any of the benefits that municipalities typically enjoy while simultaneously denying municipalities the benefits, including business confidentiality, that private entities typically enjoy. South Carolina also requires municipal providers to impute into their rates all costs that private entities would incur, including income taxes. Thus, even though a municipal provider would actually have little or no profits, it would have to raise its prices to include the profits that a hypothetical private entity would obtain, as well as the taxes that such an entity would pay on these profits. Obviously, such estimates would be highly subjective and would result in costly, protracted challenges by the incumbents. (*S.C. Code Ann. § 58-9-2600 et seq.*)
13. Tennessee bans municipal provision of paging and security service and allows provision of cable, two-way video, video programming, Internet and other “like” services only upon satisfying various anti-competitive public disclosure, hearing and voting requirements that a private provider would not have to meet. (*Tennessee Code Ann. § 7-52-601 et seq.*)
14. Texas prohibits municipalities and municipal electric utilities from offering telecommunications services to the public either directly or indirectly through a private telecommunications provider. (*Texas Utilities Code, § 54.201 et seq.*)
15. Utah imposes numerous burdensome procedural and accounting requirements on municipalities that wish to provide services directly to retail customers. Most of these requirements are impossible for *any* provider of retail services to meet, whether public or private. Utah exempts municipal providers of wholesale services from some of these requirements, but experience has shown that a forced wholesale-only model is extremely difficult, or in some cases, impossible to make successful. (*Utah Code Ann. § 10-18-201 et seq.*)

16. Virginia allows municipal electric utilities to become certificated municipal local exchange carriers and to offer all communications services that their systems are capable of supporting (except for cable services), provided that they do not subsidize services, that they impute private-sector costs into their rates, that they do not charge rates lower than the incumbents, and that comply with numerous procedural, financing, reporting and other requirements that do not apply to the private sector. (VA Code §§ 56-265.4:4, 56-484.7:1). Virginia also effectively prohibits municipalities from providing the “triple-play” of voice, video, and data services by effectively banning municipal cable service (except by Bristol, which was grandfathered). For example, in order to provide cable service, a municipality must first obtain a report from an independent feasibility consultant demonstrating that average annual revenues from cable service alone will exceed average annual costs *in the first year of operation*, as well as over the first five years of operation. (VA Code § 15.2-2108.6) This requirement, without more, makes it impossible for any Virginia municipality other than Bristol to provide cable service, as no public or private cable system can cover all of its costs in its first year of operation. Moreover, Virginia also requires a referendum before municipalities can provide cable service. (*Id.*)
17. Washington authorizes some municipalities to provide communications services but prohibits public utility districts from providing communications services directly to customers. (*Wash. Rev. Code Ann. §54.16.330*)
18. Wisconsin generally prohibits non-subscribers of the cable television services from paying any cable costs. Further, it requires municipalities to conduct a feasibility study and hold a public hearing prior to providing telecom, cable or internet services. It also prohibits “subsidization” of most cable and telecom services and prescribes minimum prices for telecommunications services. (*Wis. Stat. Ann. § 66.0422*)